

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A laser gyro comprising:
an optical ring cavity including at least three mirrors, a solid-state amplifying medium and a feedback system, the cavity and the amplifying medium being such that two counterpropagating optical modes can propagate in opposite directions at the same time, one with respect to the other inside said optical cavity, the feedback system allowing the intensity of the two counterpropagating modes to be kept almost the same, the feedback system comprising, inside the cavity, an optical assembly including a polarizing element and a device exhibiting a nonreciprocal effect that acts on the polarization state of the counterpropagating modes, wherein said optical assembly further includes a device exhibiting a reciprocal effect that also acts on the polarization state of the counterpropagating modes, the feedback system comprising control means for controlling at least one of the effects of said devices.
2. (Previously Presented) The laser gyro as claimed in claim 1, wherein the polarizing element is a linear polarizer.
3. (Previously Presented) The laser gyro as claimed in claim 1, wherein the polarizing element is at least one of the mirrors of the cavity.
4. (Previously Presented) The laser gyro as claimed in claim 1, wherein the polarizing element is either an inclined glass plate, the angle of inclination on the optical modes then being approximately equal to the Brewster angle, or one of the faces of an element of the cavity cut at the Brewster angle of incidence.

5. (Previously Presented) The laser gyro as claimed in claim 1, wherein when the device exhibiting a reciprocal effect is a second linear polarizer, the polarization direction of which is not parallel to that of the first polarizer, the feedback system consists of means for adjusting the nonreciprocal effect of the device exhibiting a nonreciprocal effect.

6. (Previously Presented) The laser gyro as claimed in claim 1, wherein when the device exhibiting a reciprocal effect is a birefringent optical plate, the feedback system comprises means for adjusting the nonreciprocal effect of the device exhibiting a nonreciprocal effect.

7. (Previously Presented) The laser gyro as claimed in claim 1, wherein when the optical cavity is a nonplanar cavity, the feedback system consists of means for adjusting the nonreciprocal effect of the device exhibiting a nonreciprocal effect.

8. (Previously Presented) The laser gyro as claimed in claim 1, wherein the device exhibiting a reciprocal effect is an optical plate exhibiting electrically controlled birefringence.

9. (Previously Presented) The laser gyro as claimed in claim 1, wherein when the device exhibiting a nonreciprocal effect consists of a material exhibiting the Faraday effect and polarized by a permanent magnet, the feedback system consists of means for adjusting the reciprocal effect of the device exhibiting a reciprocal effect.

10. (Previously Presented) The laser gyro as claimed in claim 1, wherein the device exhibiting a nonreciprocal effect consists of a material exhibiting the Faraday effect and polarized by an induction coil controlled by an adjustable electrical current.

11. (Previously Presented) The laser gyro as claimed in claim 9, wherein the amplifying medium and the material exhibiting the Faraday effect are produced in the same material.

12. (Previously Presented) The laser gyro as claimed in claim 1, wherein the cavity is monolithic, the counterpropagating optical modes propagating, inside the cavity, only in a solid material.

13. (Previously Presented) The laser gyro as claimed in claim 1, wherein the amplifying medium is based on neodymium-doped YAG (yttrium - aluminum – garnet).

14. (Previously Presented) The laser gyro as claimed in claim 1, wherein the cavity is optically pumped by at least one diode laser.

15. (Previously Presented) The laser gyro as claimed in claim 1, wherein the cavity comprises at least one optical fiber in the form of a ring, which includes optical couplers for the entry and exit of the counterpropagating beams and of at least one optical pumping beam.